

## PATENT COOPERATION TREATY

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MINNICH & MCKEE, LLPFrom the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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 FAY, SHARPE, FAGAN, MINNICH & MCKEE  
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 1100 Superior Avenue, Seventh Floor  
 Cleveland, OH 44114-2579  
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NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

16.03.2005

Applicant's or agent's file reference  
ESNZ 2 00028

## IMPORTANT NOTIFICATION

International application No.  
PCT/US 03/33240International filing date (day/month/year)  
22.10.2003Priority date (day/month/year)  
23.10.2002

Applicant

TCAM TECHNOLOGIES, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

**4. REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International  
preliminary examining authority:

European Patent Office - P.B. 5818 Patentlaan 2  
 NL-2280 HV Rijswijk - Pays Bas  
 Tel. +31 70 340 - 2040 Tx. 31 651 epo nl  
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"DOCRECTED"



## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

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|  |   |  |
|--|---|--|
| Applicant's or agent's file reference<br>ESNZ 2 00028  | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/US 03/33240   | International filing date (day/month/year)<br>22.10.2003  | Priority date (day/month/year)<br>23.10.2002 |
| International Patent Classification (IPC) or both national classification and IPC<br>A61G7/057 |   |  |
| Applicant<br>TCAM TECHNOLOGIES, INC.   |   |  |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

|  |  |
|--|--|
| Date of submission of the demand<br>22.04.2004   | Date of completion of this report<br>16.03.2005                      |
| Name and mailing address of the International preliminary examining authority:<br><br><br>European Patent Office - P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl<br>Fax: +31 70 340 - 3016 | Authorized Officer<br><br>Amghar, N<br>Telephone No. +31 70 340-3909 |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No.

PCT/US 03/33240

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**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

|            |  |
|------------|--|
| 1, 2, 5-12 | as originally filed                              |
| 3, 4       | received on 08.11.2004 with letter of 08.11.2004 |

**Claims, Numbers**

|      |  |
|------|--|
| 1-23 | received on 08.11.2004 with letter of 08.11.2004 |
|------|--|

**Drawings, Sheets**

|         |                     |
|---------|---------------------|
| 1/3-3/3 | as originally filed |
|---------|---------------------|

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description,      pages:
- the claims,      Nos.:
- the drawings,      sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |             |      |
|-------------------------------|-------------|------|
| Novelty (N)                   | Yes: Claims | 1-23 |
|                               | No: Claims  |      |
| Inventive step (IS)           | Yes: Claims | 1-23 |
|                               | No: Claims  |      |
| Industrial applicability (IA) | Yes: Claims | 1-23 |
|                               | No: Claims  |      |

2. Citations and explanations

**see separate sheet**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

- 1 Reference is made to the following document:  
D1: US 2001/032365 A1 (SRAMEK ROGER) 25 October 2001 (2001-10-25)
- 2 Document D1, which is considered to represent the most relevant state of the art, discloses a mat with an array of individual air filled bladders (§ 31, § 24, § 30) from which the subject-matter of claim 1 differs in that the heat responsive means include a heat sensor and vent structure mounted on an exposed surface of each bladder. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
  - 2.1 The problem to be solved by the present invention may be regarded as improving comfort and anti-decubitus properties of a mat.
  - 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:  
D1 fails to disclose a mat wherein the heat responsive means include a heat sensor and vent structure mounted on an exposed surface of each air filled bladder. It appears that such a heat sensor and vent structure provides precise adjustment of the pressure in the bladder by making air escape from within the cell (depressurizing it) through the vent that opens only under warming and by allowing air ventilation at the contact surface with the patient, thus contributing to improve comfort and anti-decubitus properties of the mat. In D1, only a modification of parameters such as volume and temperature due to compression and body heat would change the inside pressure of the bladders, but no vent or valve is used because there's no intention to in/outlet air and to ventilate.
  - 2.3 Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
  - 2.4 For substantially the same reasons as given for claim 1, independent method claim 17 and its dependent claims 16-23 also meet the requirements of the PCT with

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respect to novelty and inventive step.

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